# Safety Data Sheet

## SECTION 1 – IDENTIFICATION

**Name, Address, and Telephone of the Responsible Party**

**Columbia River Nitrogen, LLC**
63149 Columbia River Hwy.
Deer Island, OR 97054
Phone: 503-366-8900
Email: Info@ColumbiaRiverNitrogen.com

**SDS #:** 1138
**Date:** 08/29/2025
Supersedes. 07/20/2020

**Product Identifier**
**Product Form:** Mixture
**Product Name:** Urea – Ammonium Nitrate Solution

**Other Means of Identification**
**Synonyms:**
UAN 23%, 26%, 32%; Non-Pressure Nitrogen Fertilizer Solution; Nitrogen Solution 23%, 26%, 32%; 23-0-0; 26-0-0; 32-0-0

**Intended Use of the Product**
For professional use only.

**Emergency Telephone Number**
**FOR 24 HOUR EMERGENCY, CALL** **CHEMTREC (USA) 800-424-9300**
**CANUTEC (CANADA) 613-996-6666**

## SECTION 2 – HAZARD(S) IDENTIFICATION

**Classification of the Substance or Mixture**
**Classification (GHS-US)**
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of the product.

**Label Elements**
**GHS-US Labeling**
**Hazard Pictograms (GHS-US)** : Not applicable

**Signal Word (GHS-US)** : Not applicable
**Hazard Statements (GHS-US)** : No known significant effects or critical hazards.
**Precautionary Statements (GHS-US)** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Other Hazards**
**Hazards Not Otherwise Classified (HNOC):** None known

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

| Name | Product identifier | % (w/w) | Ingredient Classification (GHS-US) |
|---|---|---|---|
| Water | (CAS No) 7732-18-5 | 17 - 48 | Not classified |
| Ammonium nitrate* | (CAS No) 6484-52-2 | 24 - 46 | Ox. Sol. 3, H272<br>Eye Irrit. 2A, H319 |
| Urea | (CAS No) 57-13-6 | 28 - 37 | Not classified |

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

## SECTION 4 - FIRST AID MEASURES

**Description of First Aid Measures**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove/Take off immediately all contaminated clothing. Flush with plenty of water for at least 15 minutes. Seek medical advice if irritation develops or persists. Wash contaminated clothing before reuse.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** May caus eye irritation.

**Inhalation:** Dust may cause irritation to the mouth, throat, and lungs.

**Skin Contact:** Prolonged contact with large amounts of dust may cause mechanical irritation.

**Eye Contact:** May cause eye irritation. Symptoms may include: redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Ingestion:** Ammonium Nitrate: Ingestion may cause methemoglobinemia. Intial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and possibly shock. Large doses may cause systemic acidosis.

**Chronic Symptoms:** None expected under normal conditions of use.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If you feel unwell, seek medical advice (show the label where possible). Causes methemoglobinemia – emergency response should treat appropriately, such as by intravenous administration of methylene blue.

## SECTION 5 - FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire. Flood with plenty of water.

**Unsuitable Extinguishing Media:** A heavy water stream may spread burning liquid.

**Special Hazards Arising from the Substance or Mixture**

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions closed containers may rupture or explode. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.

**Hazardous Combustion Products**: Ammonia. Nitric oxide/nitrogen dioxide.

**Reference to Other Sections:** Refer to section 9 for flammability properties.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment** and Emergency Procedures
**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray, dust).
**For Non-Emergency Personnel**
**Protective Equipment:** Use appropriate personal protection equipment (PPE).
**Emergency Procedures:** Evacuate unnecessary personnel.
**For Emergency Personnel**
**Protective Equipment:** Equip cleanup crew with proper protection.
**Emergency Procedures:** Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

**Environmental Precautions**
Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**Methods and Material for Containment and Cleaning Up**
**For Containment:** Remove sources of heat or ignition. Contain spills as much as possible. Do not flush to surface water. Spilled chemical can be used as fertilizer. Follow applicable Federal, State and local reporting requirements.
**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.
**Reference to Other Sections**
See heading 8, Exposure Controls and Personal Protection.

## SECTION 7 - HANDLING AND STORAGE

**Additional Hazards When Processed:** Material will not burn but thermal decomposition may result in flammable/toxic gases being formed if evaporated to near dryness. Dry residue may form explosive mixtures with organic materials. Avoid temperatures above 100°C (212°F) which may result in evaporation, thermal decomposition or explosion. May explode by detonation, heat or shock when evaporated to near dryness. Solution may detonate if subjected to heat and pressure. If evaporated to dryness, acts as an oxidizing agent, supports combustion by liberating oxygen even if smothered.
**Precautions for Safe Handling:** Store in compliance with all Federal, State, and local regulations. Store in a well-ventilated area, away from incompatible materials or sources of heat and ignition. Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks or other sources of ignition; they may evolve noxious fumes. Never heat a dried UAN solution, especially when confined. Never combine with nitric acid.
**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
**Conditions for Safe Storage, Including Any Incompatibilities**
**Technical Measures:** Comply with applicable regulations.
**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
**Incompatible Materials:** Strong acids, strong bases, strong oxidizers, nitric acid.
**Specific End Use(s)**
For professional use only.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).
**Exposure Controls**
**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Protective goggles. Gloves. Protective clothing. Boots. If ventilation is insufficient: wear respiratory protection.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.
**Hand Protection:** Wear chemically resistant protective gloves.
**Eye Protection:** Chemical safety goggles.
**Skin and Body Protection:** Wear suitable protective clothing.
**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
**Environmental Exposure Controls:** Do not allow the product to be released into the environment.
**Consumer Exposure Controls:** Do not eat, drink or smoke during use.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**Information on Basic Physical and Chemical Properties**

| | | |
|---|---|---|
| **Physical State** | : | Liquid |
| **Appearance** | : | Not available |
| **Odor** | : | Not available |
| **Odor Threshold** | : | Not available |
| **pH** | : | Not available |
| **Evaporation Rate** | : | Not available |
| **Melting Point** | : | Not available |
| **Freezing Point** | : | Not available |
| **Boiling Point** | : | 100 °C Water (212 °F) |
| **Flash Point** | : | -11°C (12°F) for 32.5% and 0°C (32°F) for 40% solution |
| **Auto-ignition Temperature** | : | Not available |
| **Decomposition Temperature** | : | Not available |
| **Flammability (solid, gas)** | : | Not available |
| **Lower Flammable Limit** | : | Not available |
| **Upper Flammable Limit** | : | Not available |
| **Vapor Pressure** | : | Not available |
| **Relative Vapor Density at 20 °C** | : | Not available |
| **Relative Density** | : | Not available |
| **Specific Gravity** | : | 1.29 – 1.33 g/cc (10.8 – 11.1 lbs/gal) |
| **Solubility** | : | Soluble |
| **Partition Coefficient: N-Octanol/Water** | : | Not available |
| **Viscosity** | : | Not available |
| **Explosive properties** | : | Product is not explosive |
| **Explosion Data – Sensitivity to Mechanical Impact** | : | Not expected to present an explosion hazard due to mechanical impact |
| **Explosion Data – Sensitivity to Static Discharge** | : | Not expected to present an explosion hazard due to static discharge |

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** Hazardous reactions will not occur under normal conditions.
**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
**Conditions to Avoid:** Direct sunlight, extremely high temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
**Incompatible Materials:** Strong acids, strong bases, strong oxidizers, nitric acid.
**Hazardous Decomposition Products:** Carbon oxides (CO, $CO_2$). Ammonia. Nitrogen oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects - Product**
**Acute Toxicity:** Not classified
**LD50 and LC50 Data:** Not available
**Skin Corrosion/Irritation:** Not classified
**Serious Eye Damage/Irritation:** Causes serious eye irritation.
**Respiratory or Skin Sensitization:** Not classified
**Germ Cell Mutagenicity:** Not classified
**Teratogenicity:** Not classified
**Carcinogenicity:** Not classified
**Specific Target Organ Toxicity (Repeated Exposure):** Not classified
**Reproductive Toxicity:** Not classified
**Specific Target Organ Toxicity (Single Exposure):** Not classified
**Aspiration Hazard:** Not classified
**Symptoms/Injuries After Inhalation:** Dust may cause severe irritation to the mouth, throat, and lungs.
**Symptoms/Injuries After Skin Contact:** Prolonged contact with large amounts of dust may cause mechanical irritation.
**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation. Symptoms may include: redness, pain, swelling, itching, burning, tearing, and blurred vision.
**Symptoms/Injuries After Ingestion:** Ammonium Nitrate: Ingestion may cause methemoglobinemia. Intial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and possibly shock. Large doses may cause systemic acidosis.
**Chronic Symptoms:** None expected under normal conditions of use.
**Information on Toxicological Effects - Ingredient(s)**
**LD50 and LC50 Data:**

| | |
|---|---|
| **Urea (57-13-6)** | |
| **LD50 Oral Rat** | 8471 mg/kg |
| **Ammonium nitrate (6484-52-2)** | |
| **LD50 Oral Rat** | 2217 mg/kg |
| **LC50 Inhalation Rat** | > 88.8 mg/l/4h |

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not classified

| | |
|---|---|
| **Urea (57-13-6)** | |
| **LC50 Fish 1** | 16200 - 18300 mg/l (Exposure time: 96 h - Species: Poecilia reticulata) |
| **EC50 Daphnia 1** | 3910 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

**Persistence and Degradability**

| | |
|---|---|
| Not available | |
| **Bioaccumulative Potential** | |
| **Urea (57-13-6)** | |
| **BCF fish 1** | < 10 |
| **Log Pow** | -1.59 (at 25 °C) |
| **Ammonium nitrate (6484-52-2)** | |
| **BCF fish 1** | (no bioaccumulation expected) |
| **Log Pow** | -3.1 (at 25 °C) |
| **Mobility in Soil** | |
| Not available | |
| **Other Information:** Avoid release to the environment. | |

## SECTION 13 - DISPOSAL CONSIDERATIONS

**Sewage Disposal Recommendations:** Do not empty into drains. Do not flush into surface water or sewer system.
**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.
**Additional Information:** Dispose through a licensed waste disposal company. Follow federal, state and local regulations. Contaminated dirt may be spread as a fertilizer.

## SECTION 14 - TRANSPORT INFORMATION

**In Accordance with DOT** Not regulated for transport
**In Accordance with IMDG** Not regulated for transport
**In Accordance with IATA** Not regulated for transport
**In Accordance with TDG** Not regulated for transport

## SECTION 15 - REGULATORY INFORMATION

**US Federal Regulations**

| | |
|---|---|
| **Urea – Ammonium Nitrate Solution** | |
| **SARA Section 311/312 Hazard Classes** | Immediate (acute) health hazard |
| **Urea (57-13-6)** | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| **Ammonium nitrate (6484-52-2)** | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| **Water (7732-18-5)** | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

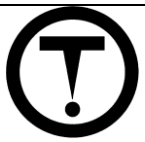
**US State Regulations**

| |
|---|
| **Ammonium nitrate (6484-52-2)** |
| **Water (7732-18-5)** |
| **Urea (57-13-6)** |
| U.S. - Minnesota - Hazardous Substance List |
| U.S. - Texas - Effects Screening Levels - Long Term |
| U.S. - Texas - Effects Screening Levels - Short Term |
| **Ammonium nitrate (6484-52-2)** |
| U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728) |
| U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities |
| U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1 |
| U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2 |
| U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity |
| U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1 |
| U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2 |

| |
|---|
| RTK - U.S. - Massachusetts - Right To Know List<br>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - New Jersey - Special Health Hazards Substances List<br>RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>RTK - U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - Texas - Effects Screening Levels - Long Term<br>U.S. - Texas - Effects Screening Levels - Short Term |

| **Ammonium nitrate (6484-52-2)** |
|---|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Pennsylvania - RTK (Right to Know) List |

| **Canadian Regulations** | |
|---|---|
| **Urea – Ammonium Nitrate Solution** | |
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |



| **Urea (57-13-6)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) | |
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |
| **Ammonium nitrate (6484-52-2)** | |
| Listed on the Canadian DSL (Domestic Substances List) | |
| WHMIS Classification | Class C - Oxidizing Material<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
| **Water (7732-18-5)** | |
| Listed on the Canadian DSL (Domestic Substances List) | |
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision Date** : 08/29/2025

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**GHS Full Text Phrases**:

| | |
|---|---|
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Ox. Sol. 3 | Oxidizing solids Category 3 |
| H272 | May intensify fire; oxidizer |
| H319 | Causes serious eye irritation |

**Party Responsible for the Preparation of This Document**

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